

Schedule for 2310451 (BBTech)

GENOMIC ANALYSIS FOR BIOTECHNOLOGY (3 credits)

Second semester (2022)

Time: MO 10.00-12.00 Room: MHVH 509/2			Co-ordinator: Kunlaya	
Time: FR 09.00 - 11.00 Room: SCIO5 301				
Topic	Lect	Prac	Date	Instructor
1. Course Orientation			Jan 9	Kunlaya
2. Next-generation sequencing platforms - Genome sequencing - Processing of raw reads	4	4	Jan 9, 13, 16, 20	Pattana
3. Genome assembly and genome annotation - Prediction of promoter, Transcription-Factor-binding site, Translation Initiation Site, and the ORF	4	4	Jan 23, 27, 30, Feb 3	Pattana
4. Detection of Sequence Polymorphism and the SNP Database	4	4	Feb 6, 10, 13, 17	Teerapong
5. High-throughput expression Analysis - RNA Sequencing - Processing of raw reads	4	4	Feb 20, 24, 27, Mar 3	Teerapong
Mid-term examination: 7-13 Mar 2023				
6. Microbiome - Metagenomics and metatranscriptomics	4	4	Mar 17, 20, 24, 27	Kunlaya
7. Genome editing and applications	4	4	Mar 31 Apr 3, 7, 10	Kunlaya
8. Applications of genome analysis (Invited Lecutre) - Understanding human genetic diseases/responses to drugs/bacterial pathogenicity - The impact of genomics on agriculture	2	2	Apr 21, 24	Guests
8. Applications of genome analysis (Discussion Panel) - Understanding human genetic diseases/responses to drugs/bacterial pathogenicity - The impact of genomics on agriculture"	2	2	Apr 28, May 1	Kunlaya, Teerapong, Pattana
Final examination: 8-19 May 2023				

Evaluation:

Paper Exam 65%

Midterm 40%

Final Exam 25%

Attendance 5%